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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/582,998

06/14/2006

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1035-643

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EXAMINER

MOONEY, MICHAEL P

ART UNIT

PAPER NUMBER

2883

MAIL DATE

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PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/582,998	<b>Applicant(s)</b> MIYACHI ET AL.	
	<b>Examiner</b> MICHAEL P. MOONEY	<b>Art Unit</b> 2883	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 1 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 8-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☐ Claim(s) \_\_\_\_\_ is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☒ Claim(s) 1-6, 8-23 are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The finality of the rejection of the 4/17/08 Office action has been reconsidered and the finality of that action is withdrawn.

Upon further consideration a restriction requirement is made infra.

### ***Election/Restrictions***

This application contains claims directed to the following patentably distinct species (species A-R):

#### **1) Medium Composition/Structure (Species A-K)**

Species A, drawn to a medium that has an orderly structure exhibiting a cubic symmetry (see claim 11).

Species B, drawn to a medium that has an orderly structure exhibiting a cubic phase (see claim 12).

Species C, drawn to a medium that has an orderly structure exhibiting a smectic D phase (see claim 12).

Species D, wherein the medium is made of a liquid crystal micro emulsion (see claim 13).

Species E, drawn to wherein the medium is made of a lyotropic liquid crystal that exhibits a micelle phase (see claim 14).

Species F, drawn to wherein the medium is made of a liquid crystal micro emulsion that exhibits a reverse micelle phase (see claim 14).

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Species G, drawn to wherein the medium is made of a liquid crystal micro emulsion that exhibits a sponge phase (see claim 14).

Species H, drawn to wherein the medium is made of a liquid crystal micro emulsion that exhibits a cubic phase (see claim 14).

Species I, drawn to wherein the medium is made of a dendrimer (see claim 16).

Species J, drawn to wherein the medium is constituted of molecules that exhibit a cholesteric blue phase (see claim 17).

Species K, drawn to wherein the medium is constituted of molecules that exhibit a smectic blue phase (see claim 18).

## **2) Fine Particle or Not (Species L-M)**

Species L, drawn to wherein the medium comprises a fine particle dispersed system (see claim 15).

Species M, drawn to wherein the medium does not comprise a fine particle dispersed system (contrast claim 15).

## **3) Capacitor(s) or Not (Species N-P)**

Species N, drawn to no auxiliary capacitor (contrast claim 20).

Species O, drawn to 1 auxiliary capacitor (see claim 20).

Species P, drawn to 2 auxiliary capacitors (see claim 21).

## **4) In-Plane Switching or Opposed Electrodes (Species Q-R)**

Species Q, drawn to wherein the first and second electrodes generate an electric field along a direction parallel to surfaces of the substrate (e.g., IPS).

Species R, drawn to wherein the first and second electrodes are formed on separate substrates (e.g., opposed electrodes switch).

The species A-R are independent or distinct because claims to the different species recite the mutually exclusive characteristics of such species. In addition, these species are not obvious variants of each other based on the current record.

It is noted that having the phrase "or vice versa" as stated in claim 1 means that the shape of a refractive index ellipsoid (SRIE) of claim 1 changes either: 1) from substantially isotropic to substantially anisotropic when the switching elements are changed from an OFF state to an ON state OR 2) from substantially anisotropic to substantially isotropic when the switching elements are changed from an OFF state to an ON state. When going from an OFF to an ON state, the instant Application's specification enables only case number 1) from above as presently claimed. Therefore, to avoid a 112 1st paragraph rejection in a future Office action, it is recommended that Applicant removes the "or vice versa" phrase from claim 1. The instant Application's specification **fully** enables only case number 1) from above as presently claimed. ***The broad genus of an isotropic on-state is not fully enabled.***

Furthermore, the instant Application's specification does not enable the claim 9 limitation "the medium exhibits optical isotropy in the presence of the electric field". Therefore, to avoid a 112 1st paragraph rejection in a future Office action, it is recommended that Applicant removes the "the medium exhibits optical isotropy in the presence of the electric field" phrase from claim 9.

Additionally, claim 10 is similar to aforementioned claims 1 and 9 in that claim 10 is not enabled by the instant Specification for the "isotropic on" state. Correction is recommended in order to avoid a 112 1<sup>st</sup> paragraph rejection in a future Office action.

Due to the large number of disclosed species, the examiner reserves the right to make an additional restriction/election requirement depending upon Applicant's election and the course of prosecution.

Applicant is required under 35 U.S.C. 121 to elect a **single** disclosed species from **each** of the following 4 groups of species (see above for details of each said group/species):

- 1) species A-K,
- 2) species L-M,
- 3) species N-P, and
- 4) species Q-R.

I.e., one of species A-K, one of species L-M, one of species N-P, and one of species Q-R must be elected (yielding a total of 4 elected species of the 18 species A-R

listed above) for prosecution on the merits to which the claims shall be restricted if no generic claim is finally held to be allowable. Currently, claim 1 is generic.

There is an examination and search burden for these patentably distinct species due to their mutually exclusive characteristics. The species require a different field of search (e.g., searching different classes/subclasses or electronic resources, or employing different search queries); and/or the prior art applicable to one species would not likely be applicable to another species; and/or the species are likely to raise different non-prior art issues under 35 U.S.C. 101 and/or 35 U.S.C. 112, first paragraph.

**Applicant is advised that the reply to this requirement to be complete must include (i) an election of a species to be examined** even though the requirement may be traversed (37 CFR 1.143) **and (ii) identification of the claims encompassing the elected species**, including any claims subsequently added. An argument that a claim is allowable or that all claims are generic is considered nonresponsive unless accompanied by an election.

The election of the species may be made with or without traverse. To preserve a right to petition, the election must be made with traverse. If the reply does not distinctly and specifically point out supposed errors in the election of species requirement, the election shall be treated as an election without traverse. Traversal must be presented at the time of election in order to be considered timely. Failure to timely traverse the requirement will result in the loss of right to petition under 37 CFR 1.144. If claims are added after the election, applicant must indicate which of these claims are readable on the elected species.

Should applicant traverse on the ground that the species are not patentably distinct, applicant should submit evidence or identify such evidence now of record showing the species to be obvious variants or clearly admit on the record that this is the case. In either instance, if the examiner finds one of the species unpatentable over the prior art, the evidence or admission may be used in a rejection under 35 U.S.C. 103(a) of the other species.

Upon the allowance of a generic claim, applicant will be entitled to consideration of claims to additional species which depend from or otherwise require all the limitations of an allowable generic claim as provided by 37 CFR 1.141.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL P. MOONEY whose telephone number is 571-272-2422. The examiner can normally be reached during weekdays, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should



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you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

/Michael P. Mooney/  
Patent Examiner, Art Unit 2883

/Frank G. Font/  
Supervisory Patent Examiner, Art Unit 2883

FGF/mpm  
8/26/08